Associations between Perceptions of Relationship Closeness and Borderline Personality Disorder Features

Undergraduate Research Thesis

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by

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Abstract

Borderline Personality Disorder (BPD) is a severe, debilitating mental disorder characterized by relationship instability, fear of abandonment, impulsivity, and emotion dysregulation (APA, 2013). Individuals with BPD often struggle to maintain long-lasting bonds such as friendships or marriages and report greater conflict and criticism in their relationships compared to healthy controls (Stepp, Pilkonis, Yaggi, Morse, & Feske, 2009). Despite relationship conflict and instability, Lazarus and Cheavens (2017) found that individuals with BPD did not differ from healthy controls in their ratings of relationship closeness. One possible explanation for these findings is that individuals with more features of BPD may use indicators of closeness (e.g., proximity, conflict, social support) differently to judge the closeness of their relationships compared to those with lower BPD features. To that end, with the present research, we examined the associations between three dimensions of relationship closeness (i.e., proximity, social support, and conflict) and BPD feature severity. We recruited 199 participants through the Research Experience Program (REP) and asked them to complete a survey that included the Inclusion of Other in the Self scale (IOS; Aron, Aron, & Smollan, 1992), the Unidimensional Relationship Closeness Scale (URCS; Dibble, Park, & Levine, 2011), and the Personality Assessment Inventory-Borderline subscale (PAI-BOR; Morey, 1991). Participants' scores on the PAI-BOR ranged from 5 to 66, meaning participants exhibit a great deal of variation in borderline feature severity. BPD feature severity was not significantly correlated with measures of relationship closeness (*ps* > .05). Additionally, there was no significant interaction between BPD feature severity and any dimension of closeness (*ps* > .05).

Introduction

Central to our identity as humans is the concept that all of us are intensely social beings. Each of us depends on several close relationships to develop our sense of self and determine our place in the world. From attachments to our caregivers in infancy to our spouses and friends in adulthood, we are shaped by our social interactions and we are driven to search for meaningful human connection (Cacioppo, Hawkley, & Berntson, 2003). Relationships are quintessential in promoting psychological wellbeing and even physical health (e.g., Schetter, 2017). For example, having strong social connections is associated with a 50% reduced risk of early death, illustrating the enormous benefits of including other people in one's own life (Holt-Lunstad, Smith, Baker, Harris, & Stephenson, 2015). However, it is important to note that not all social connections are equal in closeness. We tend to label people we do not know very well as "acquaintances" and change this designation to "friends" once we have gotten to know them better and enjoy spending time with them, thus denoting a change in how close we perceive that relationship to be. Demir (2010) found that in young adults, the quality of a relationship was strongly associated with their overall happiness. The main source of happiness for those without a significant other was their best friend and for those with a significant other, it was their romantic partner, suggesting that close relationships specifically are linked to positive wellbeing among emerging adults. The development of these friendships and partnerships is an integral part of reaching adulthood; the hierarchy of relationships, in which those in one's social network are categorized by the closeness of the relationship, is also developed in adolescence (Demir, 2010).

Given the variance in the types of relationships one experiences throughout his or her lifetime, researchers have attempted to identify which facets of a relationship are related to the determination that a relationship is "close." An early psychological definition of relationship closeness posits that it is "the degree of affective, cognitive, and behavioral mutual dependence

between two people, including the frequency of their impact on one another and the strength of impact per occurrence" (Kelley, Berscheid, Christensen, Harvey, Huston, Levinger, & Peterson, 1983). It is important to note that feeling close and behaving close are different constructs, though the combination of strong close feelings and strong close behavior is a reasonable indicator of a close relationship (Aron, Aron, & Smollan, 1992). Kelley and colleagues (1983) recommend that experimenters examine time spent, variation in activities done together, the strength of response to the other's behavior, and how long all these aspects of the relationship have been part of the relationship.

Relationship closeness has also been conceptualized as "including other in the self" (Aron, Aron, Tudor, & Nelson, 1991). In a study by Aron and colleagues (1991), participants were asked to play a social dilemma game involving money allocation to themselves and to others, and were instructed to conceptualize a specific "other" (e.g., best friend, acquaintance, stranger) while deciding which amounts of money to allocate to themselves and to the "others" in the game. The researchers that participants allocated similar amounts of money to themselves and to the other when they conceptualized their best friend as they played. There was a greater discrepancy in the money allotted between themselves and the other when they conceptualized a stranger during the game. In addition, the discrepancies in money allocation illustrate that one's representation of the self and others is more connected the closer the two people in question are, leading them to posit that the "other as included in the self" concept holds true in closer relationships (Aron et al., 1991).

Given these definitions of what constitutes a close relationship, it has become essential to understand how these definitions extend to the outside world and existing social interactions. Past researchers have examined how healthy people develop and maintain close relationships. In

a study conducted by Hess, Fannin, and Pollom (2007), 238 undergraduate students in a communications class reported the nature of their social interactions with a target relationship (i.e., work supervisor, a roommate, or an acquaintance). Participants indicated that there were three factors they used in order to develop and maintain these relationships: openness (i.e., sharing personal information, willingness to spend time together), active attention to the other (i.e., listening to their partner and treating their partner with dignity), and involvement (i.e., making an effort to spend time alone with the other person, spending longer amounts of time with the other person). These results were replicated in a follow-up study, as well as with older adults, indicating that these three factors may have some degree of universality (Hess et al., 2007).

There are several psychological disorders that can interfere with developing and maintaining close relationships. A form of psychopathology that can affect one's interactions with others is Borderline Personality Disorder (BPD). BPD is characterized by interpersonal difficulties, fear of abandonment (whether real or perceived), and intense anger (APA, 2013), all criteria that are likely to be associated with less than ideal interpersonal relationships. In a ten-year longitudinal study, BPD participants, while experiencing some improvement of interpersonal symptoms throughout the duration of the research, were far slower to improve than those with other personality disorder diagnoses. Furthermore, up to 25% of the BPD sample still exhibited symptoms of interpersonal distress at the ten-year mark (Choi-Kain, Zanarini, Frankenburg, Fitzmaurice, & Reich, 2010).

As outlined by the DSM-5 (APA, 2013), one of the greatest struggles those with BPD encounter is difficulty in maintaining interpersonal relationships. In a study of married couples where one partner had a clinical diagnosis of BPD, around 70% of the couples ended the

relationship about once every six months, followed by relationship reconciliation (Bouchard Sabourin, Lussier, & Villenueve, 2009). A compounding factor is that those with BPD are also more likely to engage in dichotomous thinking, which may result in extreme evaluations of others, especially in emotional situations, which can lead to conflict and dissatisfaction in that relationship (Veen & Artnz, 2000).

Theorists and researchers have posited several explanations as to why the relationships of those with BPD may differ from other relationships. The Object Relations Model attempts to illustrate the contrast in relationships between individuals with BPD and healthy individuals (Clarkin, Lenzenweger, Yeomans, Levy, & Kernberg, 2007). Object relations models have a basis in psychodynamic theories and have been used to describe how early internalizations of the relationship between two objects is integral to personality development. One's subjective experience and behaviors are organized by internal psychic processes. According to the object relations model, those with BPD lack the integration of early negative and positive representations of the self and others; in other words, representations of both the self and others are fractured, often into all-good and all-bad categories. It is believed that this deficit manifests as the instability seen in the social relationships of people with BPD (Clarkin et al., 2007).

Other models have provided additional theoretical explanations as to why those with BPD have a difficult time cultivating and maintaining satisfying social networks. Attachment theorists assert that one's interactions with their primary caregiver allow for the creation of the self-concept and schemas regarding the nature of self-other relationships (Bowlby, 1973). Individuals who meet criteria for BPD are more likely to have insecure attachments and a negative view of themselves; it is possible that these poor early connections set the foundation for problematic social behavior as the child matures. Mentalization is the process by which one is

able to recognize that mental states are separate, and yet have the potential to cause, one's actions. Due to neglect from a caregiver (both physical and psychological), a child who will later go on to develop BPD may not be able to accurately represent mental states of others (or, perhaps, even themselves) in their minds. This deficit can leave them vulnerable to misunderstanding the intentions, preferences, and motives of others which can result in miscommunications and unsatisfying relationships (Fonagy, Target, Gergely, Allen, & Bateman, 2003).

Another explanation for these differences has been proposed by Linehan in her biosocial theory (Linehan, 1993). The biosocial theory states that biological vulnerabilities (i.e., an intense sensitivity to emotional stimuli, higher emotion reactivity, slow return to baseline) interact with environmental stressors (i.e., chronic invalidation by one's parents or peers) over time, thus resulting in emotional and social deficits. Longitudinal studies have provided an empirical basis for this theory. Arens, Grave, Spitzer, and Barnow (2010) sampled 315 families with at least one adolescent child in Germany, assessing at baseline and five years afterward. BPD participants reported that they faced a great deal of maternal 'overprotection', which is indicative of an invalidating parenting style, as compared to healthy participants. The interaction of the harm avoidance (HA) trait plus the invalidating parenting style predicted higher levels of BPD five years later, which supports the biosocial theory (Arens et al., 2010). In a nonclinical sample, Reeves and colleagues (2010) found that emotional dysregulation partially mediated the relationship between emotional vulnerability and BPD features (Reeves, James, Pizzarello, & Taylor, 2010). These and other data suggest that both biological and environmental factors contribute to the interpersonal difficulties that a person with BPD encounters.

Past researchers have examined relationship dysfunction experienced by individuals with BPD. Stepp, Pilkonis, Yaggi, Morse, and Feske (2009) wanted to ascertain the specificity of the social difficulties experienced by participants with BPD as compared to those with other personality disorders (all grouped together as 'OPD') and healthy control participants. Participants filled out diary entries for a week about their various social interactions, which were coded by experimenters on four variables: one's control over the social interaction, degree of positive affiliation, degree of negative affiliation, and degree of ambivalence. Participants with BPD, while not experiencing any less control over their social interactions as compared to the OPD or healthy participants, reported that they interacted with fewer people per day. Additionally, BPD participants reported more anger and conflict in their relationships throughout the week of the study, as well as feeling a greater sense of 'emptiness' in their recorded interactions (Stepp et. al., 2009).

In the last few years, researchers have bolstered these findings. Lazarus, Southward, and Cheavens (2016) studied 127 female undergraduate students, some of whom scored high on the Personality Assessment Inventory - Borderline Scale, a measure of BPD features. Participants filled out questionnaires, at baseline and at one month, assessing their rejection sensitivity (RS) as well as their social networks. Using the Social Network Assessment, participants listed 24 people with whom they had interacted in the past week and rated on a Likert-scale how much conflict, criticism, satisfaction, support, and closeness they had experienced in the relationship with each of the listed people. Participants with high BPD features reported less support as well as more conflict in their relationships. BPD features predicted severing relationship ties one month later. Additionally, rejection sensitivity (RS) was associated with BPD features and RS was positively correlated with reports of criticism and conflict in one's social network (Lazarus

et al., 2016). In a follow-up study, Lazarus and Cheavens (2017) examined the social network quality in women with BPD as compared to their age and education-matched healthy counterparts using the same Social Network Assessment measure. Women with BPD indicated that they felt less satisfaction and support as well as more conflict in their relationships. Further, there was more variability in the amount of support and satisfaction within these social networks for participants in the BPD group than for those in the healthy control group. BPD participants also reported more changes in their relationships, such as cutting off friendships and no longer speaking to people they had listed in their social network, than the healthy control participants.

The impetus for the current study comes from the existing data described above (Lazarus & Cheavens, 2017). Lazarus (2015) studied 42 undergraduate women, half with BPD, to determine whether there were differences in social network stability between those with this disorder and those without. Participants with BPD reported slightly smaller social networks, as well as knowing those in their social network for a shorter period of time, then participants in the healthy control group. Additionally, the social networks of women with BPD were more likely to include parents and therapists than those of healthy controls. However, despite BPD participants reporting more conflict and criticism in their relationships, there was no significant difference in their closeness ratings of those in their social networks as compared to the healthy participants. This finding is surprising given the tumultuous nature of BPD relationships; higher levels of dissatisfaction in a relationship are traditionally considered to be associated with less close relationships (Lazarus, 2015). Looking for an explanation for this result has led to our current research.

With the present study, we attempt to explain why those with BPD, despite reporting high levels of dissatisfaction in their social relationships, tend to rate these relationships as being just

as close as those who do not have BPD symptoms. Previous researchers, to our best knowledge, have not yet discovered which facets of a relationship those with BPD regard as integral to a close relationship. We hypothesized that as BPD features increase, people will place less importance on behavioral indicators of closeness when making decisions about closeness. BPD features will moderate the relationship between relationship variables (e.g., proximity, social support, and conflict) and closeness.

Method

Participants

A total of 199 participants enrolled in the study. Participants were recruited via the Research Experience Program (REP) in the Psychology Department. All participants were undergraduate students at The Ohio State University enrolled in an introductory psychology course and over the age of 18. We decided to only include females in the present study for two reasons: First, BPD features tend to be present more frequently (or be more severe) in females (Widiger & Trull, 1993). Second, men and women differ greatly in terms of emotional memory of relationships, with women more likely to remember sad or anxious parts of romantic relationships and men more likely to remember moments of pride in their relationships (Boyacioglu, Akrifit, & Yilmaz, 2016). Participants received 30 minutes of REP credit for participating in the study.

Measures

Inclusion of Other in the Self Scale (IOS; Aron et al., 1992). The IOS is a visual measure of relationship closeness. It features seven Venn diagrams, where each diagram becomes progressively more overlapped. For each image, one circle represents the participant and the other circle represents a given relationship (e.g., a family member or a friend). The

participant selects which Venn diagram best depicts the level of closeness in a given relationship. To view this measure, please refer to Appendix B. For the study, we wanted to see how participants perceived the relationship closeness between two people with whom they were not acquainted, so we developed short vignettes. Each vignette depicted two people in a scenario that mirrored one of three dimensions of relationship closeness (proximity, social support, and conflict), for a total of two vignettes per dimension. One of the two vignettes depicted a high level of proximity, support, or conflict, and the other vignette depicted a low level of proximity, support, or conflict. Participants read each vignette and rated the closeness of the relationship using the IOS. To view all vignettes, please refer to Appendix A. These questions were scored 1 to 7, with 7 representing the Venn diagram with the greatest amount of overlap.

The Unidimensional Relationship Closeness Scale (URCS; Dibble et al., 2011).

The URCS is a twelve-item self-report measure that assesses the closeness of personal relationships. Each item is followed by a seven-part Likert scale ranging from Strongly Disagree to Strongly Agree, and the scores from each item are averaged to create a total relationship closeness score. Participants first indicated the closest relationship in their own lives (i.e. family member, significant other, friend). They then considered this relationship while answering each item of the questionnaire. Items include statements such as “My relationship with my ____ is close”, “My ___and I disclose important personal information with each other”, and “My ____ and I do a lot of things together”, all of which are indicators of the degree of relationship closeness. The URCS is scored from 1-7 for each item, with higher scores reflecting greater feelings of closeness to the person the participants specified. This measure has shown good internal consistency in previous studies (α = .92-.99; Dibble, et.al, 2011), as well as in the present study (α = .91).

Personality Assessment Inventory-Borderline Features (PAI-BOR, Morey, 1991). The PAI-BOR is a 24-item self-report instrument used to assess BPD features in adults, with higher scores indicating greater levels of BPD features. Each item is followed by a four-part Likert scale ranging from "False, not at all true" to "Very True". Items include statements such as "My moods get quite intense", "I can't handle separation from those close to me very well", and "I'm too impulsive for my own good", all of which are indicators of BPD features. The PAI-BOR is scored out of a possible 72 points, with 38 points considered the threshold for high BPD feature severity. This measure has shown good internal consistency in previous studies (α = .94; Lazarus, 2015), as well as in the present study (α = .76).

Procedure

Participants were recruited via the REP website to complete a survey on Qualtrics. First, participants provided informed consent. Then, they were presented with six vignettes (see Appendix A), each depicting two people in a relationship one might experience in daily life, but the type of relationship (e.g. family members, romantic partners, friends) was not specified. Participants were asked to rate (using the IOS scale) how close these two people are, based solely on the information in the vignette (e.g., "Person A and Person B live in the same house. They spend a lot of time together in the house before and after work and during the weekends"). For the next task, participants were asked to consider the closest relationship in their own lives, such as with a family member, significant other, or friend. They rated the closeness of that relationship using the URCS. Participants next completed the PAI-BOR to assess their level of BPD features. Finally, they answered demographics questions and were fully debriefed. They were compensated for their time with 30 minutes of REP credit for their introductory psychology course.

Data Analysis

To determine if there was an association between assessments of closeness and level of BPD features, we ran correlations between BPD feature severity and the IOS ratings for each dimension of closeness as well as between BPD feature severity and URCS scores.

To test our hypothesis that behavioral indicators of relationship closeness (e.g., social support and conflict) would be less strongly associated with closeness ratings as BPD features increase, we ran mixed ANOVAs with dimensions of closeness and BPD feature scores (independent variables) predicting closeness ratings (dependent variable). If our hypothesis is correct, we should see a significant interaction between IOS scores and BPD feature scores.

Results

Demographic and Clinical Characteristics

Participant demographic characteristics are presented in Table 1. Participants were, on average, 19.15 (*SD* = 2.97) years old and the majority self-identified as White (*n* = 160, 80.40%), heterosexual (*n* = 180, 90.50%), and single (*n* = 192, 96.50%).

Preliminary analyses indicate a wide range of BPD symptom severity among participants. Scores ranged from 5 to 66, with 20.10% *(n = 40)* of participants scoring at or above 38 points (i.e., exceeding the threshold for high BPD features); the mean on the PAI-BOR was 27.18 (*SD* = 11.88).

Ratings of Relationship Closeness

Participants Ratings of Their Own Relationships.

When asked to report on the closest relationship in their lives using the URCS, 35.2% of participants *(n* = 70) selected a family member, 33.2% *(n* = 66) selected significant other/romantic partner', and 31.2% *(n* = 62) chose a friend. There were no significant differences

in BPD feature severity based on the type of relationship closeness. The mean score on any given item on the URCS was 6.28 out of 7, indicating that participants felt very close to the person they conceptualized while answering each item. In fact, 14.1% of the sample *(n* = 28) endorsed the highest score (i.e., 7) for each item, while just one participant averaged a score below 4 across all items at 3.42.

Participants Ratings of Others' Relationships.

Table 2 presents participants' mean ratings of closeness for the vignettes depicting high and low proximity, social support, and conflict. Participants rated the vignette depicting high social support as the closest ($M = 5.99$, $SD = 1.21$), and the vignette depicting low social support as the least close ($M = 1.27$, $SD = 0.98$).

Association of BPD Features and Relationship Closeness.

To determine whether there was an association between ratings of closeness and BPD features we ran correlations between scores on both the URCS, IOS, and PAI-BOR (see Table 2). We found no significant correlations between IOS scores and PAI-BOR scores or between URCS scores and PAI-BOR scores ($ps > .12$).

In the mixed ANOVA model that included PAI-BOR scores, level of proximity (high vs. low), and their interaction predicting ratings of closeness, there was a significant main effect of level of proximity, $F(1, 198) = 63.678$, $p < 0.001$, but a non-significant main effect of PAI-BOR scores, $F(1, 198) = 0.26$, $p = 0.61$. This indicates that participants rated the high proximity vignette as being more reflective of a close relationship than the low proximity vignette, but closeness ratings were not affected by BPD feature severity. The interaction between level of proximity and PAI-BOR scores was nonsignificant, $F(1, 198) = 0.32$, $p = 0.57$, meaning that BPD feature severity did not moderate the relationship between proximity and closeness.

In the mixed ANOVA model that included BPD feature severity, level of conflict (high vs. low), and their interaction predicting ratings of closeness, there was a significant main effect of level of conflict, $F(1, 198) = 17.33$, $p < 0.001$, but a non-significant main effect of PAI-BOR scores, $F(1, 198) = 0.59$, $p = 0.44$. Thus, participants rated the low conflict vignette as being more reflective of a close relationship than the high conflict vignette, but closeness ratings were not affected by BPD feature scores. The interaction between level of conflict and PAI-BOR scores was also non-significant, $F(1, 198) = 0.43$, $p = 0.51$, meaning that BPD features did not moderate the relationship between conflict and closeness.

In the mixed ANOVA model that included BPD feature severity, level of social support (high vs. low), and their interaction predicting ratings of closeness, there was a significant main effect of level of social support, $F(1, 198) = 294.57$, $p < 0.001$, but a nonsignificant main effect of PAI-BOR scores, $F(1, 198) = .20$, $p = 0.65$. This indicates that participants rated the high social support vignette as being more reflective of a close relationship than the low social support vignette, but BPD feature severity did not have a significant effect on closeness ratings. The interaction between level of social support and PAI-BOR scores was nonsignificant, $F(1, 198) = 0.07$, $p = 0.80$, meaning that BPD feature severity did not moderate participant ratings of relationships with high or low social support.

Overall, participants tended to rate relationships as closer if there was high proximity or social support or low conflict than relationships with low proximity or social support or high conflict, but closeness ratings did not differ based on BPD features. Further, there were no significant interactions between any of the indices of closeness and the PAI-BOR scores, meaning that self-reported severity of BPD features did not moderate how participants rated the relationships of fictitious others.

Between-Groups Analysis of Closeness Ratings

The PAI-BOR is a continuous measure of BPD feature severity, but it has a cut-off point of a score of 38, at which an individual is considered to have high BPD feature severity and may meet diagnostic criteria. In our sample, 40 participants out of 199 scored 38 or more points and were considered the high BPD feature severity group. Using a random number generator, we selected 40 participants who scored below 38 points on the PAI-BOR to be the low BPD feature severity group and ran independent sample t-tests to determine if there were any significant differences in closeness ratings between the low BPD feature severity group and the high BPD feature severity group. For the URCS self-report measure, we found no significant mean difference between these groups, $t(78) = 1.36$, $p = 0.18$, meaning that when asked to rate their relationship with the closest person in their life, low BPD feature severity and high BPD feature severity participants did not differ significantly in their ratings, which supports the previous literature (Lazarus, 2015).

For the proximity dimension in the IOS scale, there was a nonsignificant difference in closeness ratings for High Proximity, $t(78) = 0.14$, $p = 0.09$, as well as for Low Proximity, $t(78) = 1.10$, $p = 0.54$, meaning that the High and Low BPD feature severity groups did not significantly differ in their ratings of the High and Low Proximity vignettes.

For the conflict dimension in the IOS scale, there was a nonsignificant difference in closeness ratings for High Conflict, $t(78) = 0.39$, $p = 0.13$, as well as for Low Conflict, $t(78) = 0.001$, $p = 1.00$, meaning that the High and Low BPD feature severity groups did not significantly differ in their ratings of the High and Low Conflict vignettes.

For the social support dimension in the IOS scale, there was a nonsignificant difference in closeness ratings for High Social Support, $t(78) = 0.20$, $p = 0.75$, as well as for Low Social

Support, $t(78) = 0.59$, $p = 0.19$, meaning that the High and Low BPD feature severity groups did not significantly differ in their ratings of the High and Low Conflict vignettes.

Discussion

With our research, we attempted to answer the question of whether BPD features would interact with features of close relationships to predict closeness ratings. We chose proximity, social support, and conflict as the dimensions of the relationship and then measured closeness using the IOS scale. We also asked participants to self-assess the closeness of their relationships with the closest person in their lives using the URCS, as well as complete a questionnaire to assess BPD features.

At the beginning of this research endeavor, we hypothesized that as BPD features increase, people will place less importance on certain common behavioral indicators of closeness such as proximity, support, and conflict, when making decisions about closeness. The results of our study did not support this hypothesis, as BPD feature severity did not moderate the relationship between relationship indicators (e.g., social support, proximity, and conflict) and closeness ratings. This means there is still a gap in the existing literature regarding close relationships and how those who exhibit high BPD features perceive these relationships and determine whether these relationships are close. It is yet to be explained why those with BPD rate their social networks as being just as close as the relationships experienced by healthy people despite reporting far greater degree of conflict and less support and satisfaction in their social interactions with others.

Future researchers should examine other dimensions of relationship closeness that were not measured in this study to determine if there is an association between ratings of those dimension and BPD feature severity. Dimensions such as relationship duration, number of daily

interactions (positive and negative), and trust may be worthwhile to study in this context, as it is possible that individuals with BPD consider these aspects of a social relationship more important in determining whether a relationship is close than healthy participants.

One important limitation of this research is that the vignettes used in the IOS measure were developed specifically for this study and, therefore, have not been validated. For the three dimensions of relationship closeness studied (proximity, social support, conflict), there were two vignettes, one depicting a high degree of the given dimension, and one depicting a low degree of the given dimension. A problematic aspect of the vignettes is that they are fictitious and it is hard to determine if participants would rate real world relationships in the same way they rated the made-up relationships. Instead of fictitious relationships, participants should have conceptualized themselves in these relationships and then made their ratings, so the relationships would feel more concrete to them. Additionally, the vignettes were not very nuanced, instead providing rather extreme examples of high and low proximity, social support, and conflict. Adding more levels besides ‘high’ and ‘low’ may improve the reliability of this measure.

Another possible improvement to future studies examining relationship closeness using the IOS measure with vignettes would be to include more than one index of relationship closeness per vignette. For our study, each vignette depicted one index of closeness (proximity, conflict, social support), but it is likely that in considering the level of closeness between two people, multiple indices are considered. Including vignettes that feature both conflict and proximity, for example, would allow participants to take two elements of closeness into consideration when rating the overall closeness of the people described in the vignette. Additionally, these vignettes only featured three indices of closeness, but there are many other

dimensions that are considered by an individual when deciding if a relationship is close (e.g., relationship duration, criticism, trust) that should be considered in future research as well.

Further, in the self-report measure (URCS), we noticed that all participants rated their selected closest rating as being very close (an average of 6.28 out of 7 points for each of the twelve items), which suggests a ceiling effect. This is likely because participants selected their closest relationship; it is to be expected that one's closest relationship would be perceived as being very close. Future researchers may wish to ask participants to select several relationships that vary in closeness (e.g., a family member, a coworker, a psychotherapist) and rate each one on the URCS. It is possible that those with higher BPD feature severity would rate more professional relationships (e.g., professor, psychotherapist) differently than those with lower BPD feature severity.

Another limitation of this research is the homogeneity of the present sample; thus, generalizability is limited. Although the study had null results, the participants were all undergraduate female students enrolled in an introductory psychology course at a large Midwest university, so this finding may not be representative of the American population. Future researchers may wish to conduct a similar study with more diverse demographic characteristics, including age, as nearly all the participants in the current research were between 18-23 years of age. An older sample may collectively have a different perspective on relationship closeness regardless of their scores on the borderline personality assessment given their increased life experiences. Further, because a majority of people diagnosed with BPD are female, we only sampled females for this study. A meta-analysis of 75 studies by Widiger and Trull (1993) concluded that while females make up a larger percentage of BPD diagnoses, 24% of those diagnosed are male. Therefore, in future studies, researchers may wish to include males or have a

male-only sample to determine if there are gender differences in perceptions of relationship closeness along the continuum of borderline feature severity. This was also a non-clinical sample; future researchers should sample from those who have a BPD diagnosis, compared to a healthy control group.

With our study, we asked participants to complete a survey in which they were asked to assess the relationship closeness of two unfamiliar people in a vignette and to self-report how close they felt to a specific person in their lives by thinking about that relationship while answering each self-report item. There were no follow-ups, so all data are from one specific point in time. Future researchers may want to include one or more follow-ups with the participants, weeks or months after baseline, as it is possible that the participant's relationship with the self-reported closest person in their life may have changed. A common element of BPD is relationship instability and many patients report sudden and turbulent ends to friendships and relationships (Bouchard et al., 2009). Thus, a follow-up with participants in a future study may reveal that those who score high on the borderline feature assessment may rate the closest person in their lives less positively or may even indicate they consider a different person to be the closest person in their lives, as they have cut ties with the first person.

Continued research regarding the social relationships of people with BPD remains an important endeavor. Understanding how patients with a specific disorder view social relationships adds to the global body of knowledge regarding interpersonal connections. Close personal relationships have been evolutionarily necessary for human survival since the time of our earliest ancestors, so it would behoove the psychological community to have the greatest breadth and depth of information regarding them as possible. While most literature seems to have reached similar conclusions as to what constitutes positive social relationships for healthy

individuals (i.e. social support, satisfaction, spending a lot of time together), a great deal is still unknown as to how those with various psychiatric conditions perceive their social networks, thus introducing questions future psychologists should work to answer.

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TABLES

Table 1

Demographic Characteristics

Demographic	Total (N = 199)
% White	80.4
% Not Hispanic/Latino	94
% Heterosexual	90.5
% Single/Never Married	96.5
% With No Children	98.5

Table 2

Correlations Between Closeness Measures and BPD Feature Severity

Measure	1	2	3	4	5	6	7	8
1. PAI-BOR	-							
2. Closeness HP	0.002	-						
3. Closeness LP	0.06	0.18*	-					
4. Closeness HSS	0.01	0.29**	0.14*	-				
5. Closeness LSS	0.04	0.22**	0.12	-0.13	-			
6. Closeness HC	0.01	0.21**	0.16*	0.17*	-0.07	-		
7. Closeness LC	0.07	0.36**	0.14*	0.27**	-0.09	0.07	-	
8. URCS	-0.11	0.11	0.19*	0.19*	-0.07	0.06	0.07	-
M	27.18	5.03	2.45	5.99	1.27	2.84	4.60	6.28
SD	11.88	1.40	1.17	1.21	0.96	1.26	1.63	0.70

Note. Correlations for IOS dimensions of closeness and PAI-BOR scores and URCS self-reported closeness and PAI-BOR scores are presented above, along with the means and standard deviations of all measures. HP=High Proximity, LP=Low Proximity, HSS=High Social Support, LSS=Low Social Support, HC=High Conflict, LC=Low Conflict.

*$p < .05$, **$p < .01$

APPENDIX A

Vignettes for Inclusion of Other in the Self (IOS) Questionnaire

1. Person A and Person B live in the same house. They spend a lot of time together in the house before and after work and during the weekends.
2. Person A and Person B disagree about almost everything. They fight quite frequently, but they apologize and make up every time.
3. Person A and Person B always tell each other about their problems and very personal information. They keep each other's secrets and help each other through difficult times.
4. Person A and Person B live in different states. Due to the distance, they can only communicate via Skype and text. They very rarely are able to hang out in person.
5. Person A and Person B very rarely argue or fight. They agree on almost everything and can easily come to a compromise.
6. Person A and Person B do not trust each other with personal information. Neither are able to keep a secret or help each other through problems.

APPENDIX B

Inclusion of Other in the Self Scale (IOS) Venn Diagrams